

3 ~~32~~ 4. The endosseous dental implant according to Claim ~~3~~, wherein the highest points of said bone-tissue apposition surface substantially aligns with the interproximal areas of the bone-tissue, and wherein the lowest points of said bone-tissue apposition surface substantially aligns with the buccal area of the bone-tissue.

Cont 4
B' 3 ~~33~~ The endosseous dental implant according to Claim ~~2~~ further comprising:
a soft-tissue apposition surface formed on said shaft and disposed between said bone-tissue apposition surface and said abutment-implant interface, said soft-tissue apposition surface including at least one peak and trough configured to approximate the physiological contours of naturally occurring soft-tissue morphology.

MB 5 ~~34~~ The endosseous dental implant according to Claim ~~2~~ further comprising:
a means for connecting an abutment to said abutment-implant interface for use in a two-stage procedure.

Sub C 6 ~~35~~ The endosseous dental implant according to Claim ~~6~~, wherein said abutment-implant interface has a substantially planar upper surface approximately 90° to the longitudinal axis of said shaft, and wherein said planar upper surface substantially surrounds said means for connecting.

7 ~~36~~ 8. The endosseous dental implant according to Claim ~~6~~, wherein said abutment-implant interface has a contoured upper surface, and wherein said contoured upper surface substantially surrounds said means for connecting.

8 ~~37~~ 9. The endosseous dental implant according to Claim ~~8~~, further comprising an abutment wherein a lower surface of the abutment substantially abuts against said contoured upper surface, thereby providing improved lateral support.

9 ~~38~~ 10. The endosseous dental implant according to Claim ~~2~~, further comprising:
an abutment permanently attached to said abutment-implant interface for use in a one-stage procedure.

¹⁰
~~39~~ 11. The endosseous dental implant according to Claim ~~10~~, wherein said shaft and said abutment are constructed from a single piece of material.

⁴⁰
Subc2
Cont
B112
12. The endosseous dental implant according to Claim ~~10~~, wherein said abutment has a substantially planar upper surface approximately 900 to the longitudinal axis of said shaft and wherein said planar upper surface substantially surrounds a chimney.

³⁸
~~9~~
~~38~~
13. The endosseous dental implant according to Claim ~~10~~, wherein said abutment has a contoured upper surface and wherein said contoured upper surface substantially surrounds a chimney.

¹³
~~44~~
14. A one-stage endosseous dental implant, comprising:
a shaft made from a biocompatible material, said shaft having a distal end and a proximal end;
a bone-tissue apposition surface formed on said shaft and disposed adjacent to said abutment-implant interface, said bone-tissue apposition surface including at least one peak and trough configured to approximate the physiological contours of naturally occurring bone-tissue morphology; and
an abutment permanently attached to the proximal end of said shaft.

⁴³
Subc3
15. The one-stage endosseous dental implant according to Claim ~~14~~, wherein said abutment has a substantially planar upper surface approximately 900 to the longitudinal axis of said shaft, and wherein said planar upper surface substantially surrounds a chimney.

⁴²
~~13~~
~~44~~
16. The one-stage endosseous dental implant according to Claim ~~14~~, wherein said abutment has a contoured upper surface and wherein said contoured upper surface substantially surrounds a chimney.

⁴⁵
~~45~~
17. A two-stage endosseous dental implant system, comprising:
a shaft made from a biocompatible material, said shaft having a distal end and a proximal end;
a bone-tissue apposition surface formed on said shaft and disposed adjacent to said abutment-implant interface, said bone-tissue apposition surface including at least one peak

and trough configured to approximate the physiological contours of naturally occurring bone-tissue morphology;

an abutment-implant interface disposed towards the proximal end of said shaft;

an abutment configured to attach to said abutment-implant interface;

a means for connecting said abutment to said abutment-implant interface; and

a crown having a distal end configured to fit over said abutment.

46
18. The two-stage endosseous dental implant system according to Claim 17, wherein said abutment-implant interface has a substantially planar upper surface substantially surrounding said means for connecting, and wherein said upper planar surface is approximately 90° to the longitudinal axis of said shaft.

19. The two-stage endosseous dental implant system according to Claim 18, wherein said abutment has a substantially planar upper abutment-crown interface surface.

20. The two-stage endosseous dental implant system according to Claim 18, wherein said abutment has a contoured upper abutment-crown interface surface substantially surrounding a chimney, and wherein a distal end of said crown is configured such that at least an outside surface of said crown extends to and follows the contours of said upper abutment-crown interface surface, thereby providing a narrow depth between the distal end of said crown and said bone tissue apposition surface.

21. The two-stage endosseous dental implant system according to Claim 17, wherein said abutment-implant interface has a contoured upper surface substantially surrounding said means for connecting, and said contoured upper surface approximately matches the contour of the natural bone morphology, and wherein said abutment has a lower surface configured to substantially abut said contoured upper surface.

22. The two-stage endosseous dental implant system according to Claim 21, wherein said abutment has a substantially planar upper abutment-crown interface surface.

23. The two-stage endosseous dental implant system according to Claim 21, wherein said abutment has a contoured upper abutment-crown interface surface substantially surrounding a

chimney, and wherein a distal end of said crown is configured such that at least an outside surface of said crown extends to and follows the contours of said upper abutment-crown interface surface, thereby providing a narrow depth between the distal end of said crown and said bone-tissue apposition surface.

23
Cont 32
B1
24. A one-stage endosseous dental implant system, comprising:
a shaft made from a biocompatible material, said shaft having a distal end and a proximal end;
a bone-tissue apposition surface formed on said shaft and disposed adjacent to said abutment-implant interface, said bone-tissue apposition surface including at least one peak and trough configured to approximate the physiological contours of naturally occurring bone-tissue morphology;
an abutment permanently attached to the proximal end of said shaft; and
a crown having a distal end configured to secure to said abutment.

53
sub C57
25. The one-stage endosseous dental implant system according to Claim 24, wherein said abutment has a substantially planar upper surface substantially surrounding a chimney, and wherein said upper planar surface is approximately 900 to the longitudinal axis of said shaft.

25
54
26. The one-stage endosseous dental implant system according to Claim 24, wherein said abutment has a contoured upper surface substantially surrounding a chimney, and wherein said contoured upper surface approximately matches the contour of naturally occurring bone-tissue morphology.

26
55
27. The one-stage endosseous dental implant system according to Claim 26, wherein a distal end of said crown is configured such that at least an outside surface of said crown extends to and follows the contours of said contoured upper surface, thereby providing a narrow depth between the distal end of said crown and the bone-tissue apposition surface.

CONCLUSION:

If there are any fees or credits due in connection with the filing of this Amendment, including any fees required for an Extension of Time under 37 C.F.R. Section 1.136,

authorization is given to charge any necessary fees to our Deposit Account No. 16-1150
(order no. 9677-004-999). A copy of this sheet is enclosed for such purpose.

Respectfully submitted,

Date November 8, 2000



45,645

Dion M. Bregman
for William S. Galliani

Reg. No.
33,885

PENNIE & EDMONDS LLP
3300 Hillview Avenue
Palo Alto, CA 94304
(650) 493-4935